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ABSTRACT

As more women enter the managerial ranks, organizations are finding it necessary to address the possibility of gender bias in managerial performance ratings. To investigate the existence of gender bias in managerial performance ratings as they relate to problem-solving strategies, 197 college students (46 percent female) and 127 managers (of those who reported gender, 37 percent reported female), from a variety of organizational settings in Kansas, read a scenario describing a manager in a manufacturing organization who had a limited time to solve a production problem. Subjects subsequently rated the manager's performance according to promotion criteria and leadership characteristics. The scenario was manipulated for manager's sex, managerial or problem solving strategy, final outcome, and timing of the outcome. An analysis of the results showed that the students showed little evidence of gender bias in their responses; however, the female manager generally received slightly higher ratings on leadership characteristics than her male counterpart. The male managers did show gender bias, giving female managers low ratings following failure, but giving male managers equally high ratings for success or failure. (BL)

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Gender Bias in Managerial Performance Ratings

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ABSTRACT

The growing number of female managers has called attention to the possibility of gender bias in managerial performance ratings. One potential source of bias is differential reaction to managerial problem-solving strategies. Undergraduates and managers read scenarios describing either a female or male manager displaying either an experimenting or a consistent problem-solving strategy. Also manipulated were final outcome (success vs. failure) and timing of the final outcome (immediate vs. delayed). Contrary to predictions, no gender bias was found in ratings made by students or female managers. Data from male managers, however, did reveal a gender bias, suggesting that such attitudes are learned and reinforced in organizational settings.

Gender Bias in Managerial Performance Ratings

As more women enter the managerial ranks, organizations are finding it necessary to address issues that have received little attention in the past. One such issue concerns the possibility of gender bias in managerial performance ratings. Such bias would have serious implications for the career opportunities of female managers, because subjective performance ratings form the basis for most personnel actions at the managerial level.

Recent research suggests that a manager's problem-solving strategy may affect his or her performance ratings. Staw and Ross (1980) found that successful managers received higher ratings when they were described as being consistent (i.e., having stayed with an unsuccessful policy until it eventually succeeded) than when they were described as having experimented with new policies after their first choice had failed. Knight (in press) found this to be the case only when success was delayed. When success was immediate, managers received higher ratings when they experimented with all available policies.

These studies are limited in having only examined ratings of male managers. Given the popular stereotype of management as a masculine occupation (Schein, 1973, 1975), and studies that have shown that given equal achievement the performance of men tends to be attributed to ability, whereas the performance of women tends to be attributed to luck (e.g., Deaux & Emswiller, 1974), one might expect gender to moderate the effects of problem-solving strategy upon subsequent performance ratings. For example, in certain situations a consistent male manager may be perceived as being self-assured, whereas a similarly consistent female manager may be seen as stubborn. Further, although an experimenting man may be seen as innovative, a similarly disposed woman may be seen as uncertain or "wishy-washy." In either case, perceptions and ratings of women would suffer relative to those of men. This research was designed to test this possibility.

METHOD

One hundred and ninty-seven undergraduate psychology students and 127 managers served as subjects in this research. The student sample was 46 percent female. Ninty-two (72 percent) of the managers reported their gender, and of these 34 (37 percent) were women. Four of the managers were employees of a large Texas city. The rest of the managers were employed by a wide variety of organizations in the state of Kansas, including manufacturing firms, insurance companies, banks, a state university, and civilian Army employees. Participation of the managers was solicited either by contacting upper-level personnel managers in each organization and asking for their cooperation in distributing the materials to managers and supervisors in their organization, or during management development seminars conducted by the second author. To be included in the management sample, a person had to supervise at least one other person's work. One hundred and ninty-one managers were asked to participate, and the final sample represents a response rate of 67 percent. The students participated in partial fulfillment of a course requirement.

Each subject read a scenario describing a manager in a manufacturing organization who had a limited time (12 months) to solve a production problem involving an unacceptably high defect rate (cf., Knight, in press). Three policy options for solving the problem were also described. Half of the subjects read about a female manager (Joan Ziegler), half about a male manager (John Ziegler). Orthogonally crossed with gender were three factors: managerial strategy (consistent vs. experimenting, manipulated by having the manager stay with his or her initial policy after each of two preliminary feedback reports, vs. changing policies after each report), final outcome (success vs. failure), and timing of the final outcome (immediate, in which the eventual final outcome was reported in the first feedback report, and remained the same thereafter, vs. later, in which the final outcome did not occur until the final feedback report, and was preceded by the opposite outcome in the preliminary reports).

After reading the scenario, subjects completed a questionnaire from which two dependent variables were derived. The first was a performance rating, consisting of the sum of three 7-point Likert items: an overall performance evaluation (outstanding to very poor), a rating of how much the manager deserved a raise, and a rating of how much the manager deserved a promotion (M = 11.29, SD = 4.48, alpha = .91). The second was a leadership characteristics rating, consisting of the sum of ratings of how intelligent, careful, and strong the manager was, whether the manager had a well-developed theory of the problem, and whether he or she was the kind of decision maker needed in industry (M = 19.11, SD = 7.23, alpha = .89).

RESULTS

For the purposes of this paper, only effects involving the gender of the ratee and differences in results between male and female subjects will be discussed. For purposes of interpreting some of these effects, it should be noted that there were significant main effects ($p < .01$) for outcome (success vs. failure) on both dependent variables in the total sample and in all subsamples, except for the male managers.

Manipulation Checks

The effectiveness of the strategy manipulation was checked by summing responses to the following 7-point Likert items (1 = strongly agree, 7 = strongly disagree): "John (Joan) Ziegler kept changing his (her) administrative policies", "John (Joan) Ziegler was very consistent in his (her) decision making" (reverse scored), and "John (Joan) Ziegler had an experimenting approach to problem solving." The cell means were in the expected direction, with higher scores in the consistent condition (M = 15.44) than in the experimenting condition (M = 11.35), $F(1,286) = 111.53$, $p < .01$, indicating that the manipulation was successful.

The timing manipulation was checked by summing the following 7-point Likert items: "Joan (John) Ziegler's decisions appear to have solved the production problem

very quickly" (reverse scored), and "Joan (John) Ziegler's actions had no immediate effect on the production problem." If effective, the manipulation should have resulted in an outcome by timing of outcome interaction on this variable. This interaction was significant, $F(1,286) = 285.30$, $p < .01$, and showed the expected pattern of cell means. The highest rating was in the immediately successful condition ($M = 9.85$), followed by the later failure ($M = 8.27$), later success ($M = 5.12$) and immediate failure ($M = 3.47$) conditions.

Finally, the outcome manipulation was checked by the following 7-point Likert item: "At the end of the 12-month trial period, the defect rate was below the standard (6 percent) set by the company." Subjects in the success condition agreed with this statement more strongly ($M = 1.64$) than those in the failure condition ($M = 6.51$), $F(1,273) = 1068.19$, $p < .01$.

Analyses of Dependent Variables

Analysis of variance of the performance ratings from the combined student and manager data revealed no significant effects involving either the gender of the ratee or the gender of the subjects. Analysis of the combined leadership characteristics scale resulted in one significant gender effect: Higher ratings were obtained when the ratee was a woman ($M = 19.84$) than when the ratee was a man ($M = 18.25$), $F(1,286) = 5.99$, $p < .05$.

Separate analyses of both dependent variables were conducted for the student and manager samples. In the student data the only gender effect was the main effect for the gender of the ratee on the leadership characteristics scale, $F(1,159) = 5.96$, $p < .05$. The female ratee was rated higher on this scale than was the male ratee ($Ms = 22.01$, 20.24, respectively). This replicates the effect for gender found in the total sample. Separate analyses for male and female students yielded equivalent results.

The analyses of the manager's data revealed no significant effects involving ratee gender. Separate analyses on the data provided by male and female managers did, however, reveal several differences. The performance ratings provided by the female managers showed only a main effect for the outcome condition, favoring the successful ratee (M = 12.79) over the failing ratee (M = 7.87), $F(1,23)$ = 14.41, $p < .01$. Similarly, the female managers' leadership characteristics ratings showed a main effect for outcome favoring the successful ratee (M = 20.16 vs. 13.67 for the failing ratee), $F(1,23)$ = 8.33, $p < .01$. In contrast, the data provided by the male managers showed only a marginally significant main effect on the performance rating favoring the successful ratee (M = 9.68) over the failing ratee (M = 7.90), $F(1,42)$ = 3.93, $p < .10$, and no effect for outcome on the leadership characteristics rating, $F(1,42)$ = 2.69, $p > .10$. The cell means from these analyses suggested that the female managers were giving higher ratings than were the male managers. Analysis of the performance scale showed that this was indeed the case. The mean rating given by the women was 10.62, while the mean rating provided by the men was 8.76, $F(1,90)$ = 5.00, $p < .05$. The mean rating given by the managers not reporting their gender was 9.43, which was not significantly different from the other means.

Beyond these differences in the effects of the outcome manipulation, the performance ratings from the male managers revealed two significant two-way interactions involving the gender of the ratee. First, there was an outcome by gender interaction, showing that when successful, both male and female ratees received relatively high ratings, though when they failed, only the female ratee received lower ratings (see Table 1). The second interaction was between gender and the timing of the outcome. When the outcome occurred early in the scenario, both male and female ratees received moderate-level performance ratings. When the outcome occurred at the end

of the scenario, the male ratee received higher ratings. A similar interaction between gender and timing was observed in the leadership characteristics ratings provided by the male managers (see Table 2).

DISCUSSION

The current study was designed to test for the presence of gender bias in managerial ratings. Evidence of such bias on the part of some managers was found, as were differences in the patterns of ratings obtained from student and manager samples. The students, both male and female, showed little evidence of gender bias in their responses. They did, however, give slightly higher ratings to the female ratee on the leadership characteristics rating. This is consistent with research suggesting that because female managers are unexpected exceptions to the masculine stereotype of managers, they will receive higher evaluations (Bigoness, 1976; Taynor & Deaux, 1973).

The managers' ratings did not show this pattern favoring the female ratee. Female managers appear to have focused upon the final outcome as the primary determinant of the ratings they made. Ratings provided by the male managers, on the other hand, were influenced by the gender of the ratee, with female ratees receiving lower ratings after failing than after succeeding, while male ratees received equally high ratings under both outcome conditions.

An unexpected and initially puzzling finding was the gender by timing of outcome interaction observed in both the performance and leadership characteristics ratings made by the male managers. Male ratees received substantially higher ratings when the outcome occurred later rather than earlier in the scenario, whereas the female ratees received slightly lower ratings when the outcome occurred later. This presented some difficulty in interpretation because the interaction was not moderated by the outcome itself (success vs. failure), and it was not obvious why the timing

of the outcome should affect ratings independent of the nature of the outcome. Examination of the pattern of feedback received by ratees in the immediate and later outcome conditions, however, suggests a plausible explanation. In the immediate outcome condition, the ratee received either all failure or all success feedback, the combined effects of which balanced out and resulted in the moderate ratings observed in these cells. In the later outcome condition, each ratee received one feedback report (the final one) indicating a different level of performance than the other reports. Subjects in these cells therefore read about a manager who had received both success and failure feedback. It is possible that the male managers attended to the fact that male ratees were successful at least part of the time, and thus discounted the failure feedback, while stressing that fact that the female ratees were unsuccessful at least part of the time, and thus discounted the success feedback. While this explanation is speculative, it is consistent with the gender bias observed in the outcome by gender interaction in the male managers' ratings, as well as the prevailing masculine stereotype of management.

Taken together, the student and manager data suggest that gender bias against female managers may be a serious problem. While it is true that the evidence for such bias in the present study is limited in that the student data and the ratings made by female managers did not show any bias, there was clear evidence of gender bias against the female ratee on the part of the male managers. Further, although these subjects were only a small percentage of the total sample in this study, men represent the vast majority of managers in business organizations, and therefore the source of nearly all performance ratings. These findings therefore indicate a potentially serious obstacle to the career opportunities of women in management. The fact that these effects were found only among male managers, and not among any other subsamples, including male students, suggests that the socialization of

of male managers may account for these attitudes. Weiss (1977,1978) has shown that the attitudes of lower-level managers show a correspondence to the attitudes of their superiors, and has suggested that this correspondence develops through the process of vicarious learning. Such an explanation might account for why students, who would not be exposed to the behavior and attitudes of male business managers, and female managers, who would be expected to reject such attitudes, or around whom male managers might feel reluctant to express their bias, did not demonstrate such a bias. Again, this study was not designed to test this particular hypothesis, and empirical verification is necessary.

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Table 1

Gender by Outcome Interaction on

Performance Rating: Male Manager Sample*

Outcome	Gender of Ratee		Total
	Female	Male	
Success	9.71	9.64	9.68
Failure	6.88	9.23	7.90
Total	8.16	9.23	8.76

*$F(1,42) = 5.12$, $p < .05$

Table 2

Gender by Timing Interactions:

Male Manager Sample

a. Performance Rating*

Timing of Outcome	Gender of Ratee		Total
	Female	Male	
Immediate	8.53	8.33	8.44
Later	7.71	10.83	9.15
Total	8.16	9.44	8.76

b. Leadership Characteristics Rating**

Timing of Outcome	Gender of Ratee		Total
	Female	Male	
Immediate	15.47	13.40	14.50
Later	14.79	20.75	17.54
Total	15.16	16.67	15.86

*$F(1,42) = 6.25$, $p < .05$

**$F(1,42) = 6.96$, $p < .05$